



# What Can We Do?

Solutions to Arizona's Water Challenges

**WRRC 2023 Annual Conference**  
**July 12, 2023**

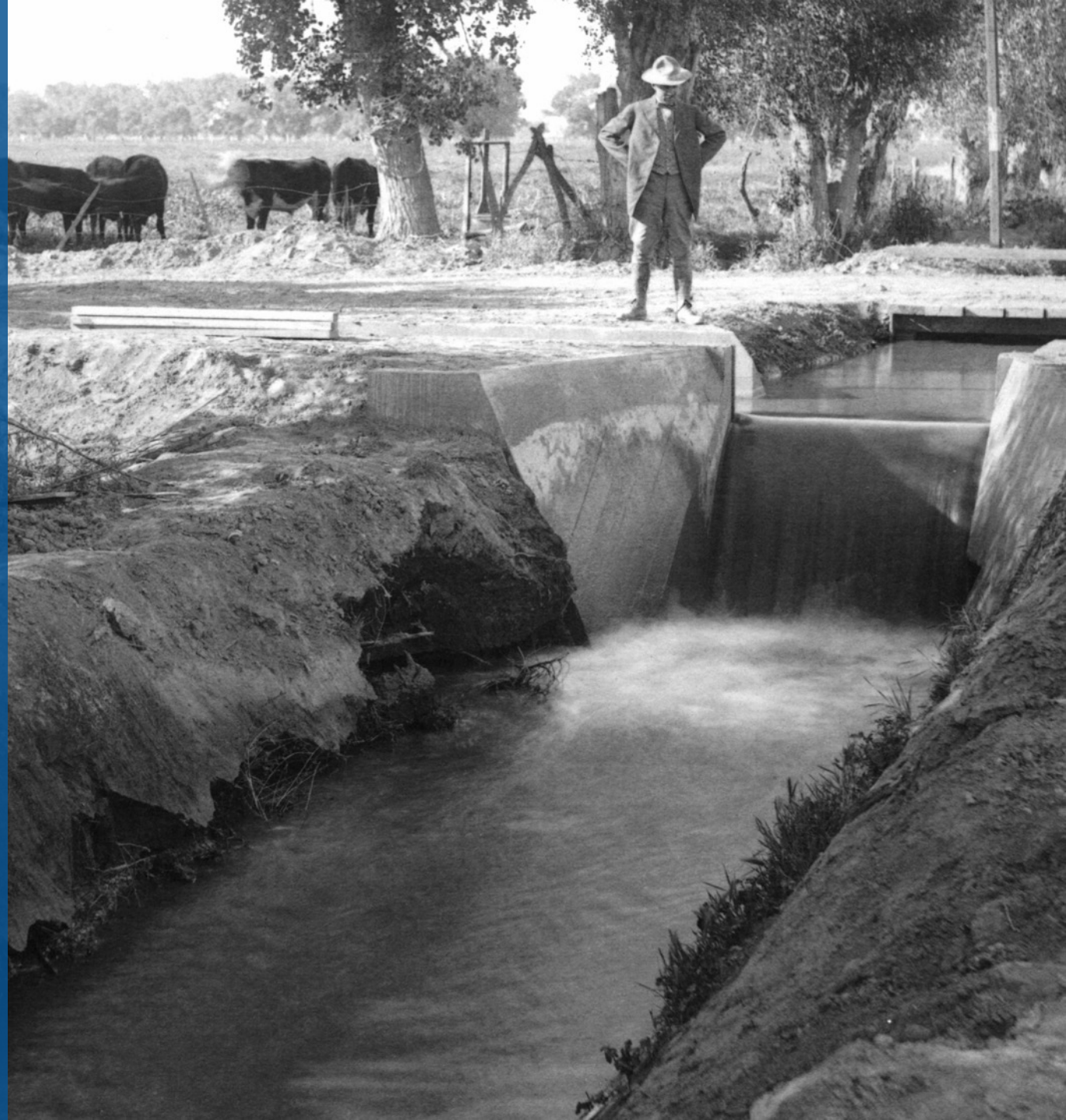
**Leslie Meyers, SRP**  
**Associate General Manager Water Stewardship**

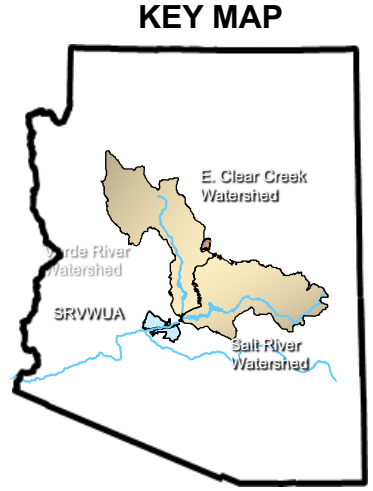
# ARIZONA'S WATER SUPPLY



# History

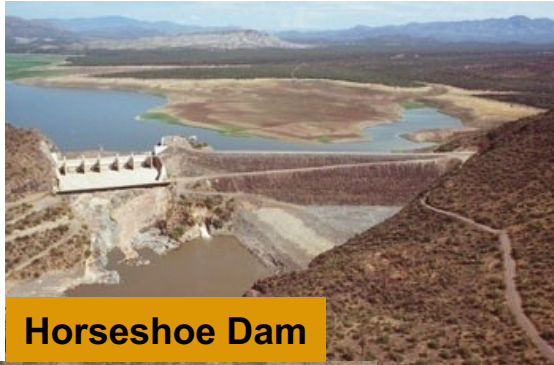
- Delivering water to the Valley since 1903
- One of the first projects in the United States under the Federal Reclamation Act.
- SRP's first power service to the Valley was 1909





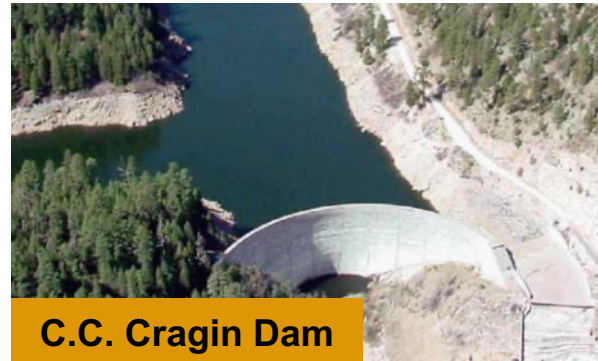
# Salt River Project Reservoir System

**Total Storage Capacity**  
**4,072,279 / 2,292,904 Acre-Feet**



**Horseshoe Dam**

## East Clear Creek



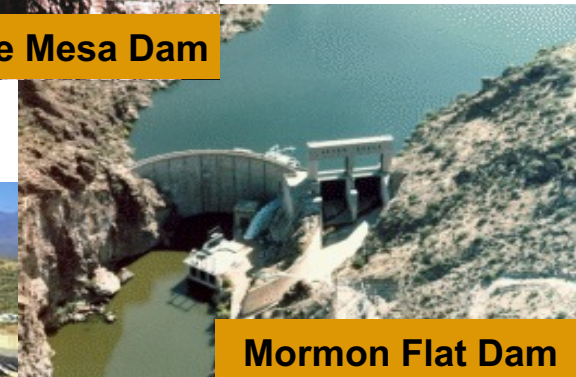
**C.C. Cragin Dam**



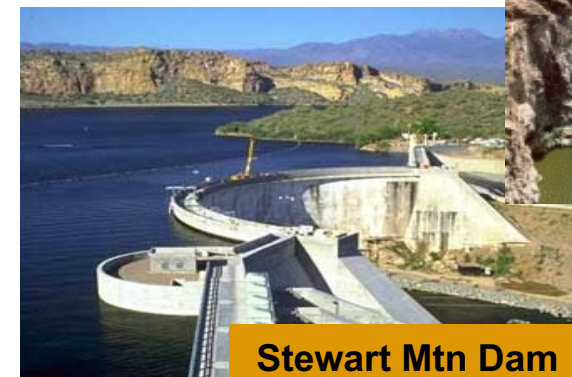
**Roosevelt Dam**



**Horse Mesa Dam**



**Mormon Flat Dam**



**Stewart Mtn Dam**

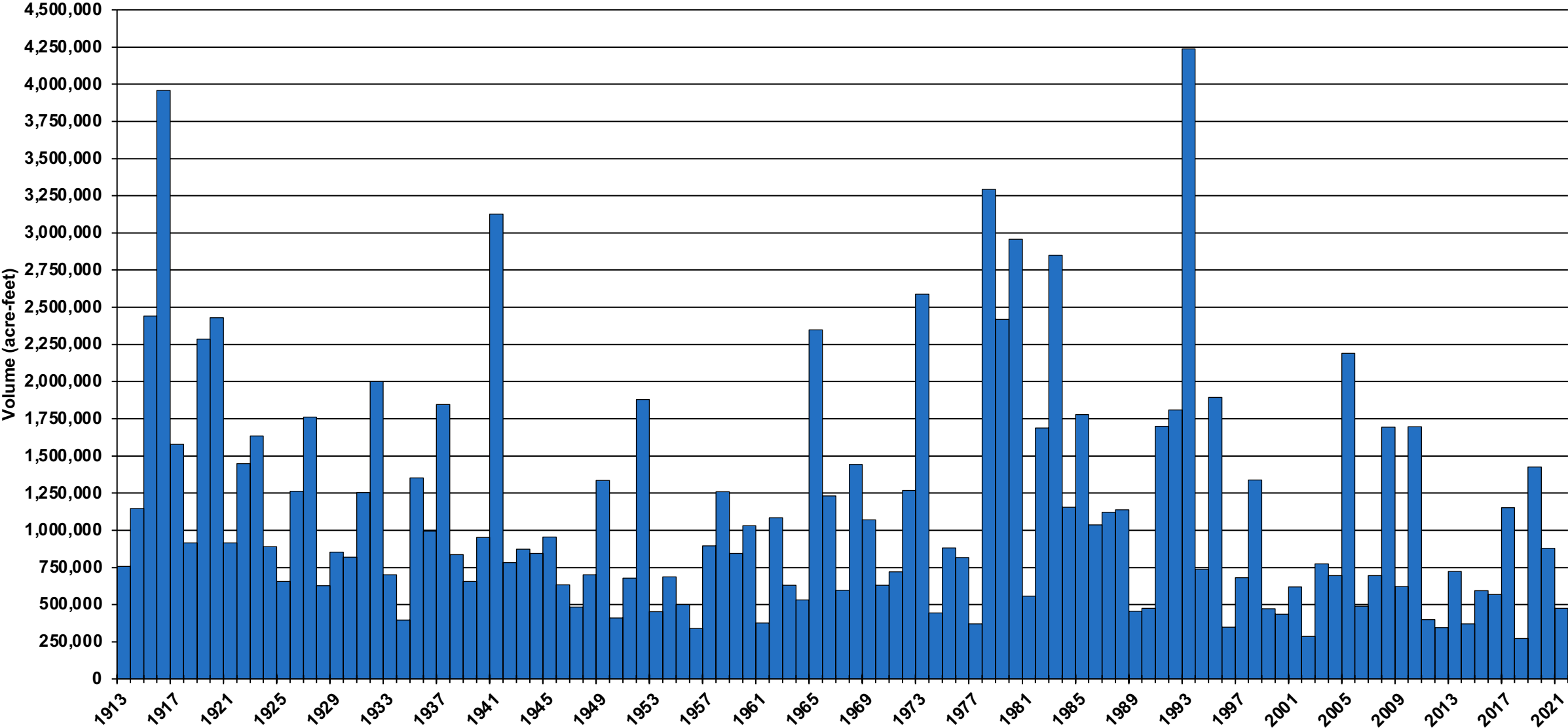


**Bartlett Dam**

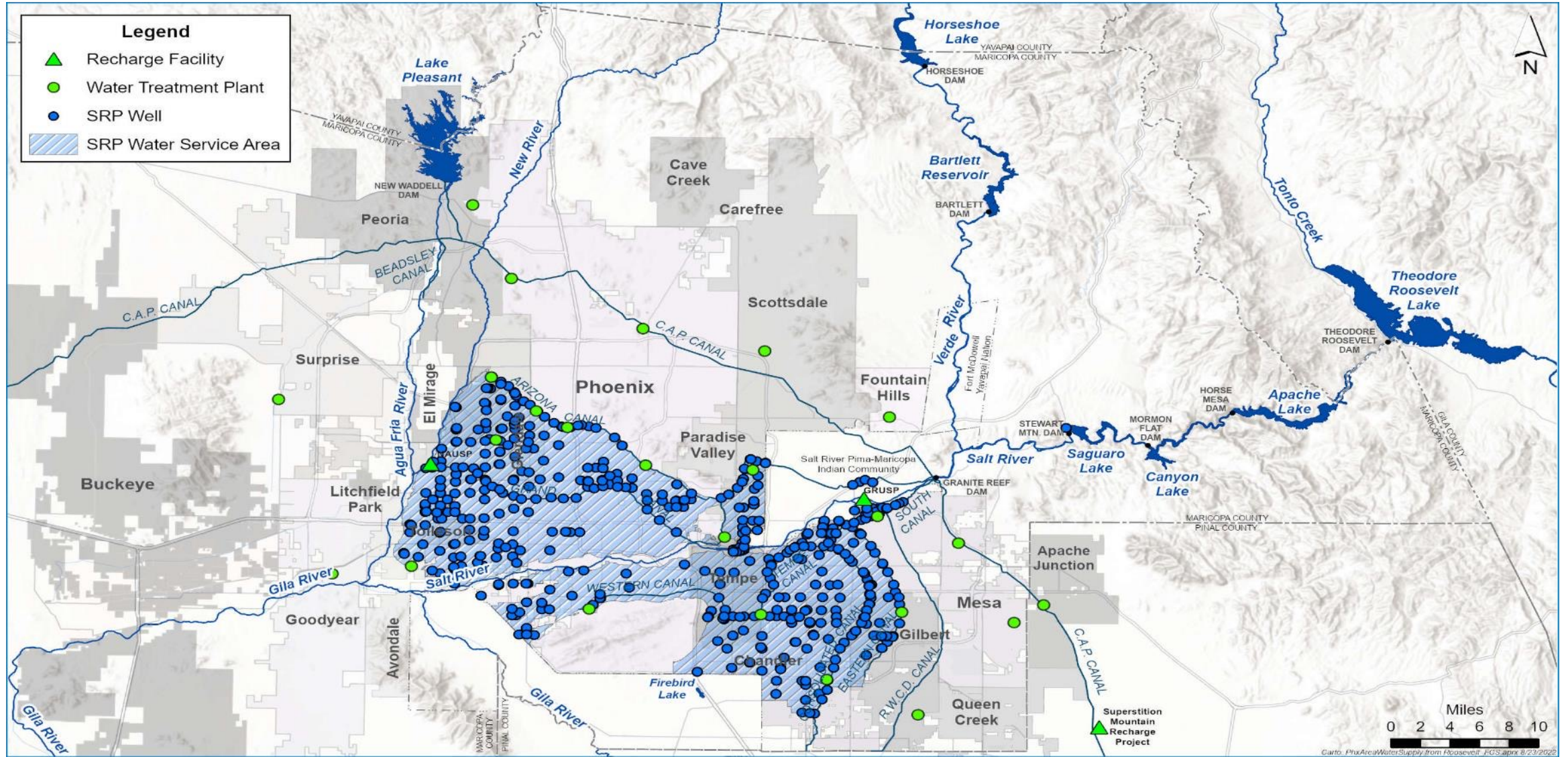
## Verde River

## Salt River

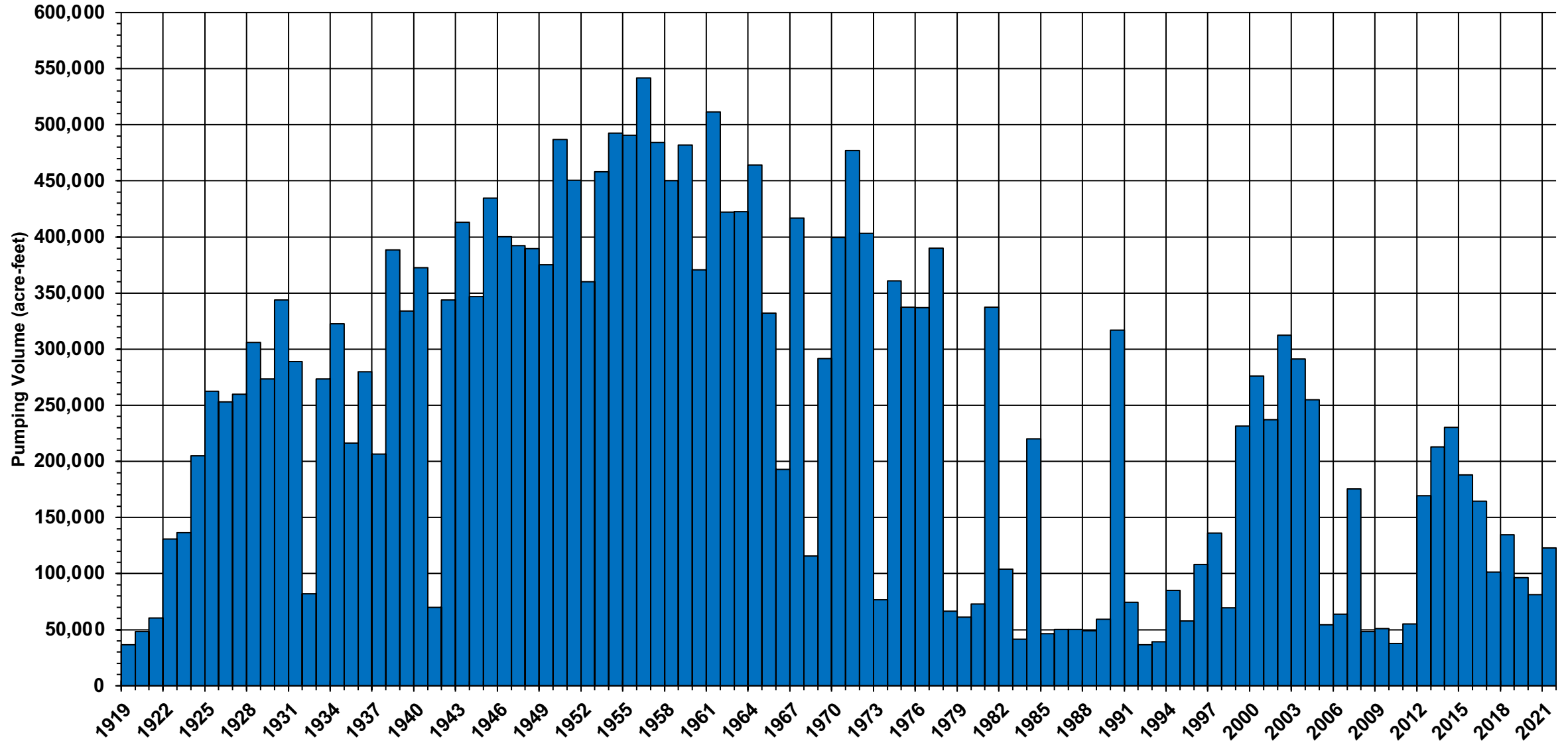
# Annual Inflow to SRP Reservoirs



# Salt River Project Water System & Groundwater Wells

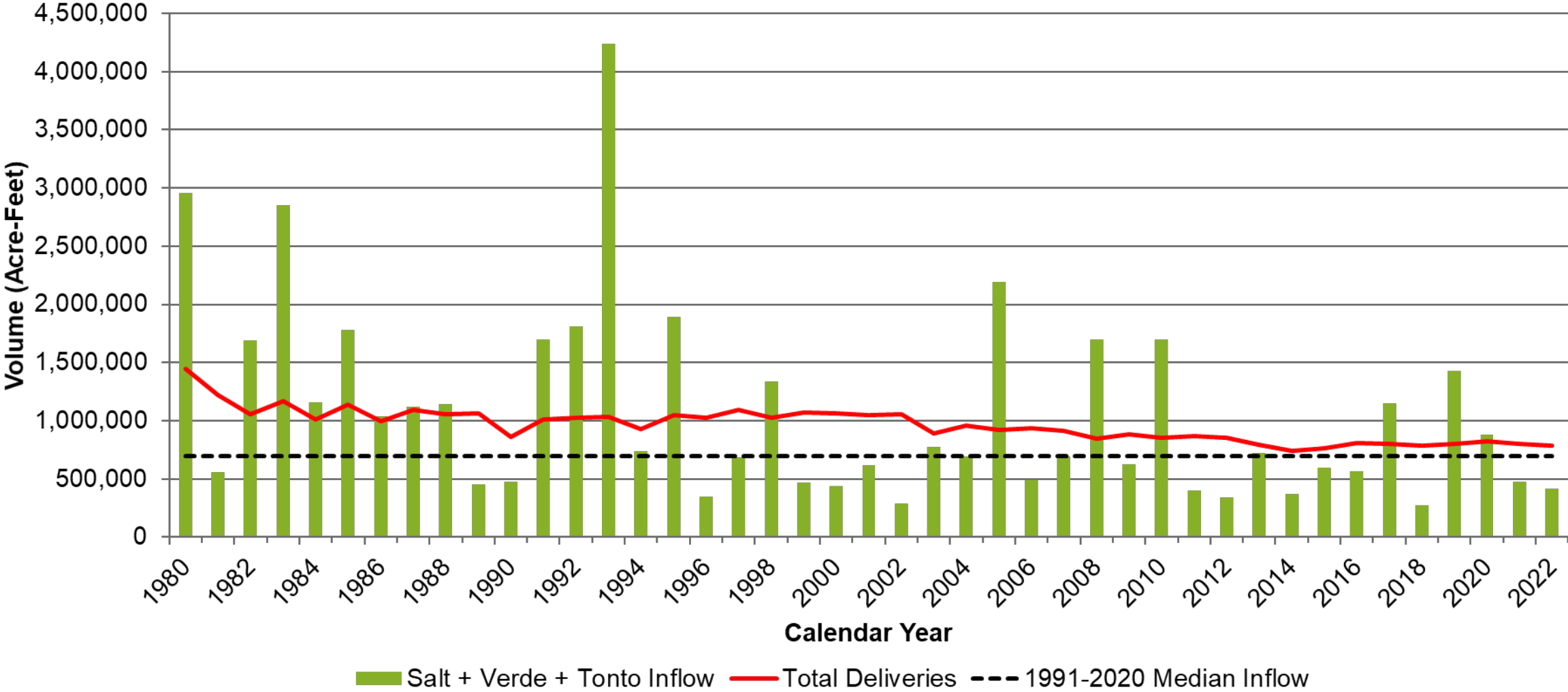


# Annual SRP Pumping





# Inflow and Delivery Trends



# CAP System Map



# CSIF - CAP/SRP Interconnection Facility



# Water Banking Facilities

## New River/Agua Fria River Underground Storage Project



## Granite Reef Underground Storage Project



# Colorado River Issues

## In the news....

### U.S. Department of Interior declares further restrictions on Colorado River water supply



The federal government has officially stepped in and announced a tier two water reduction, limiting the amount of water Southern Nevada is allowed to withdraw from Lake Mead in 2022. See Medley report.



CLIMATE CHANGE, POLICY & ECONOMICS

### The Looming Colorado Water Shortage Crisis

CRISIS - BIOSYSTEM VIABILITY | BY OLIVIA LAI | AMERICAS | JUN 10TH 2022 | 5 MINS

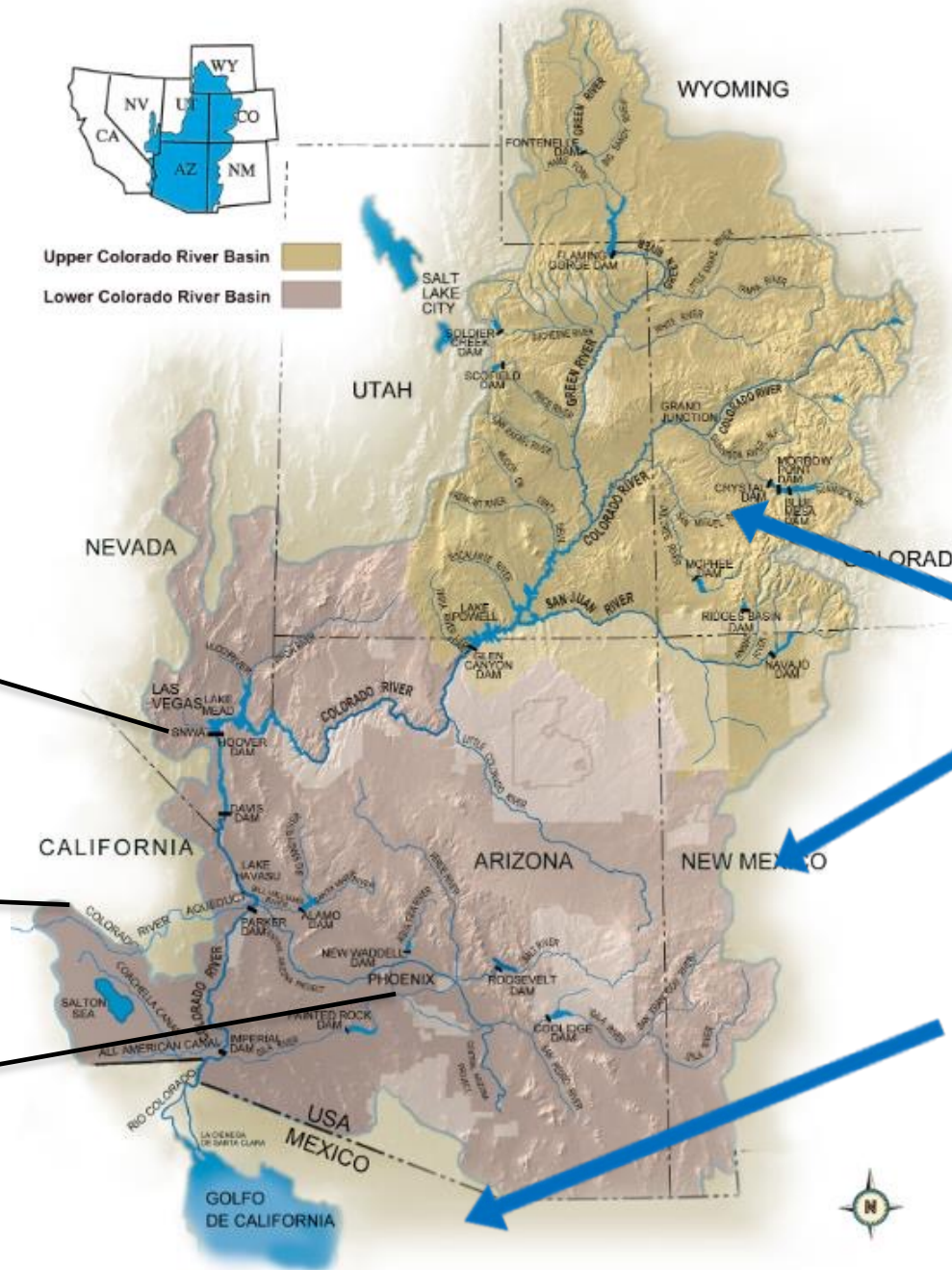


# Allocations

NV = 300 kaf

CA = 4.4 maf

AZ = 2.8 maf



7.5 maf each to UB & LB

Mexico = 1.5 maf

# Planning for Shortage

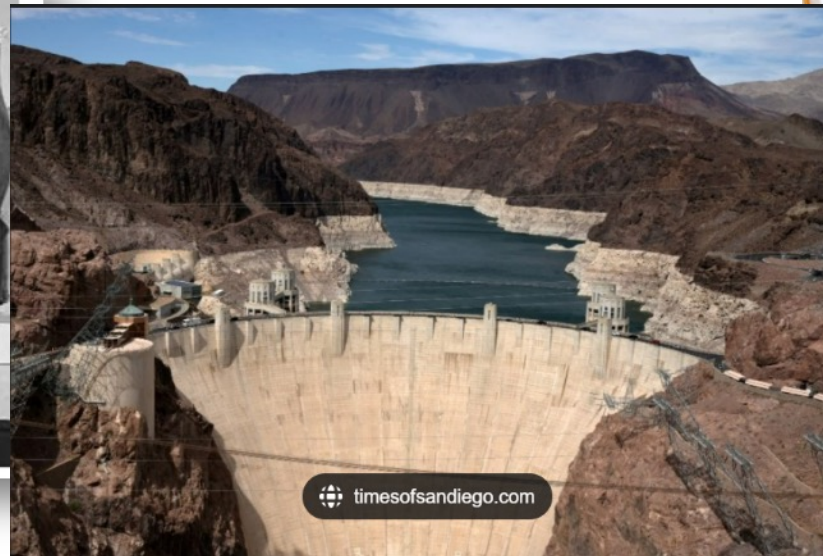
- 2007 Interim Guidelines
- 2019 Drought Contingency Plan

## COLORADO RIVER 2007 INTERIM GUIDELINES AND DROUGHT CONTINGENCY PLANS

In 2005, after six years of severe drought in the Colorado River Basin, federal officials and representatives of the seven basin states — California, Arizona, Nevada, New Mexico, Colorado, Utah and Wyoming — began building a framework to better respond to drought conditions and coordinate the operations of the basin's two key reservoirs, [Lake Powell](#) and [Lake Mead](#).



The resulting Interim Guidelines for Lower Basin Shortages and the Coordinated Operations for Lake Powell and Lake Mead (Interim Guidelines) identified the conditions for shortage determinations and details of coordinated reservoir operations. The 2007 Interim Guidelines remain in effect through Dec. 31, 2025.



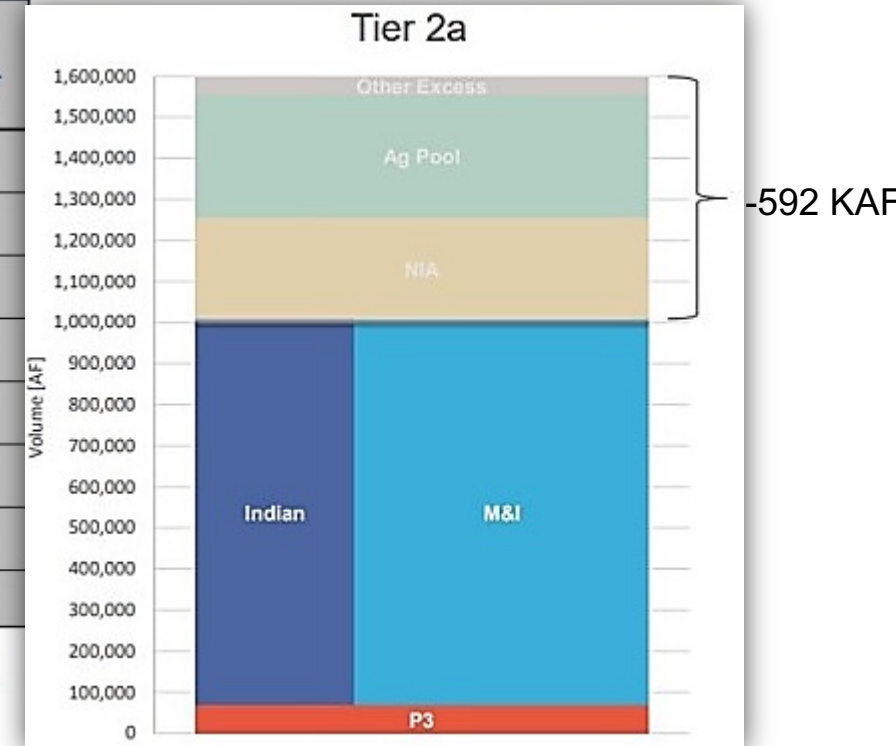
# Lower Basin Drought Planning

2007 Interim Guidelines, Minute 323, Lower Basin Drought Contingency Plan, and Binational Water Scarcity Contingency Plan  
Total Volumes (kaf)

| Lake Mead Elevation (feet msl) | 2007 Interim Guidelines Shortages |    | Minute 323 Delivery Reductions | Total Combined Reductions   | DCP Water Savings Contributions |    |     | Binational Water Scarcity Contingency Plan Savings | Combined Volumes by Country |          |   |                          |              | Total Combined Volumes      |
|--------------------------------|-----------------------------------|----|--------------------------------|-----------------------------|---------------------------------|----|-----|--|-----------------------------|----------|---|--------------------------|--------------|-----------------------------|
|                                | AZ                                | NV |                                |                             | Lower Basin States + Mexico     | AZ | NV  |  | CA                          | Mexico   | US: (2007 Interim Guidelines Shortages + DCP Contributions) |                          |              |                             |
|                                | AZ                                | NV | Mexico                         | Lower Basin States + Mexico | AZ                              | NV | CA  | Mexico   | AZ Total                    | NV Total | CA Total  | Lower Basin States Total | Mexico Total | Lower Basin States + Mexico |
| 1,090 - 1,075                  | 0                                 | 0  | 0                              | 0                           | 192                             | 8  | 0   | 41   | 192                         | 8        | 0   | 200                      | 41           | 241                         |
| 1,075 - 1,050                  | 320                               | 13 | 50                             | 383                         | 192                             | 8  | 0   | 30   | 512                         | 21       | 0   | 533                      | 80           | 613                         |
| 1,050 - 1,045                  | 400                               | 17 | 70                             | 487                         | 192                             | 8  | 0   | 34   | 592                         | 25       | 0   | 617                      | 104          | 721                         |
| 1,045 - 1,040                  | 400                               | 17 | 70                             | 487                         | 240                             | 10 | 200 | 76   | 640                         | 27       | 200   | 867                      | 146          | 1,013                       |
| 1,040 - 1,035                  | 400                               | 17 | 70                             | 487                         | 240                             | 10 | 250 | 84   | 640                         | 27       | 250   | 917                      | 154          | 1,071                       |
| 1,035 - 1,030                  | 400                               | 17 | 70                             | 487                         | 240                             | 10 | 300 | 92   | 640                         | 27       | 300   | 967                      | 162          | 1,129                       |
| 1,030 - 1,025                  | 400                               | 17 | 70                             | 487                         | 240                             | 10 | 350 | 101  | 640                         | 27       | 350   | 1,017                    | 171          | 1,188                       |
| <1,025                         | 480                               | 20 | 125                            | 625                         | 240                             | 10 | 350 | 150  | 720                         | 30       | 350   | 1,100                    | 275          | 1,375                       |

The Secretary of the Interior will take affirmative actions to implement programs designed to create or conserve 100,000 acre-ft per annum or more of Colorado River System water to contribute to conservation of water supplies in Lake Mead and other Colorado River reservoirs in the lower basin. All actions taken by the United States shall be subject to applicable law, including availability of appropriations.

Tier 1 →  
Tier 2a →  
Tier 2b {  
Tier 3 →

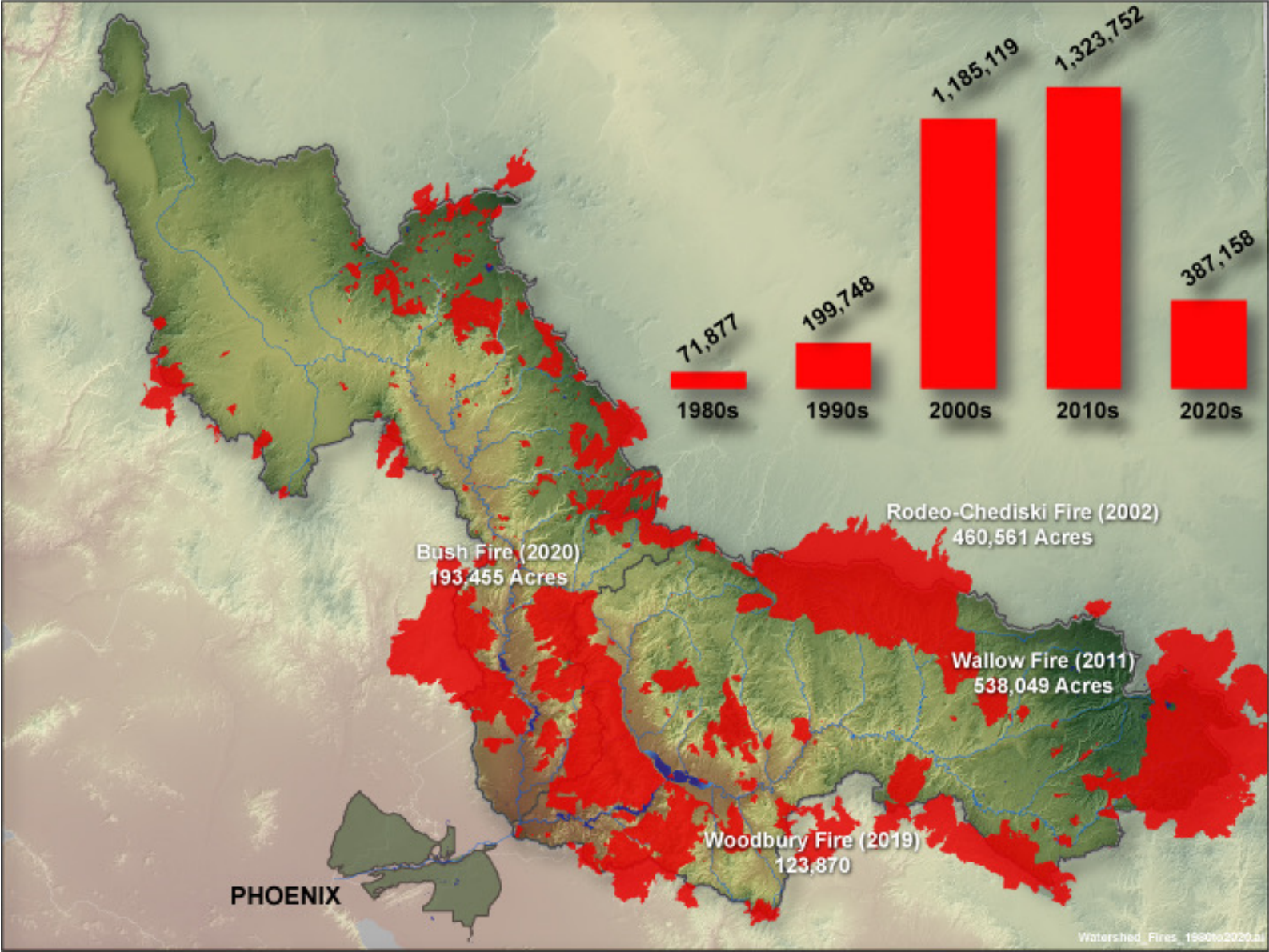




# Key Initiatives for SRP Water Resources

- Gila River/Little Colorado River Adjudications, tribal water rights settlements
- Climate change research
- Forest restoration
- Reoperation of Roosevelt Flood Control Space
- Sedimentation – Modifications to Bartlett dam; additional storage capacity; addresses imbalance
- Full integration of the SRP/CAP systems – SRP/CAP Interconnection Facility; facilitate additional wheeling of water supplies; build resiliency into both systems
- Recovery of Long-Term Storage Credits for storage partners
- Additional pump storage generation

# Forest Restoration



# Operational Flexibility in Roosevelt Dam Flood Control Space



357'

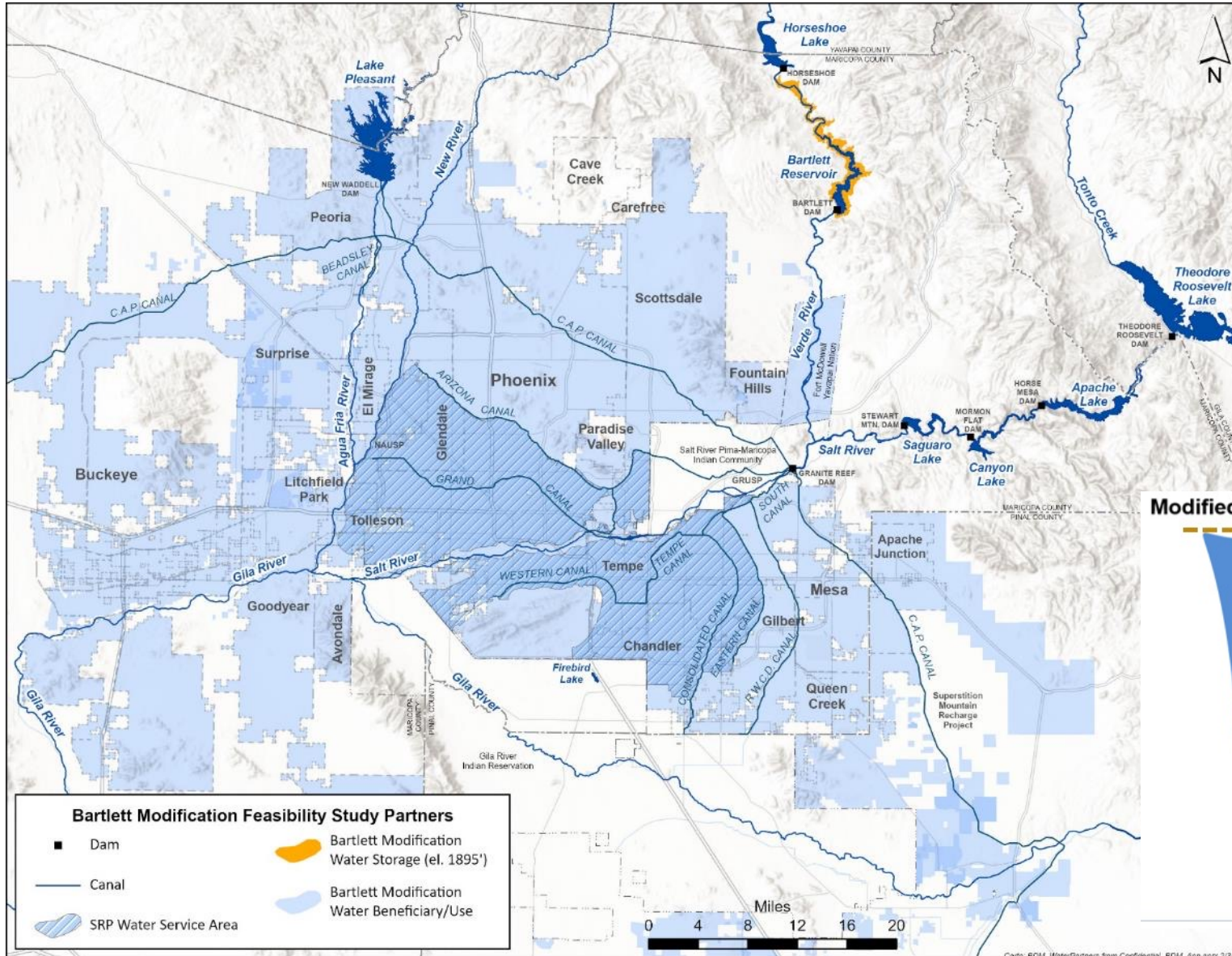
**SAFETY OF DAMS SPACE**  
357' - 1,223,169 AF

**FLOOD CONTROL SPACE**  
314' - 556,206 AF

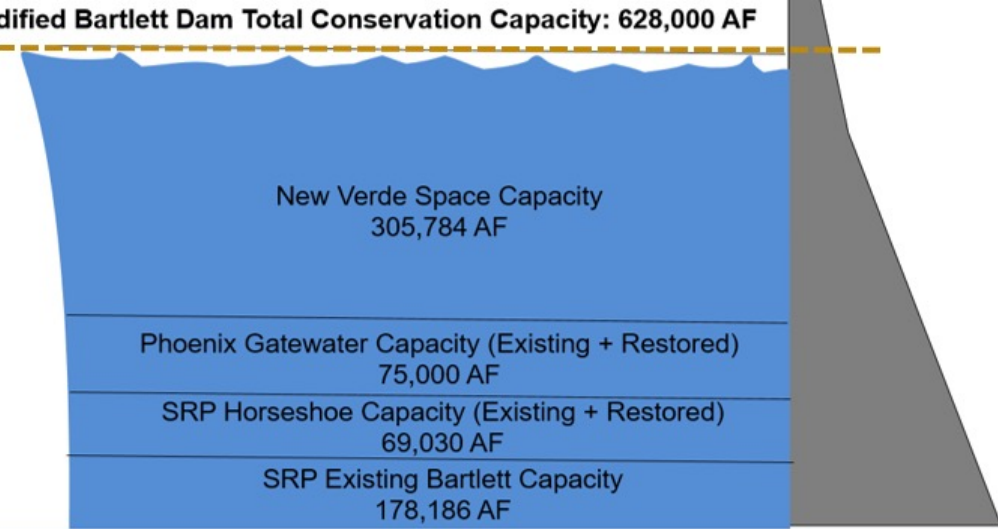
**CONSERVATION STORAGE SPACE**  
290' - 1,631,532 AF

**ROOSEVELT DAM**

# Bartlett Dam Modification



**Modified Bartlett Dam Total Conservation Capacity: 628,000 AF**



# SCIF – SRP/CAP Interconnection Facility



**thank you!**